

SH5.0/10RT

Residential Hybrid Three Phase Inverter



FLEXIBLE APPLICATION

- 150–600V wide battery voltage range
- Supports parallel connection with master-slave controlling
- Provides 100% power to unbalance loads in backup mode

SMART MANAGEMENT

- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings

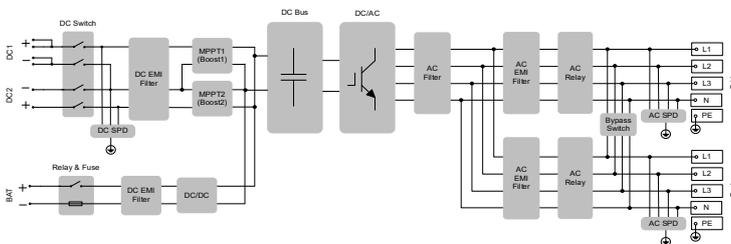
ENERGY INDEPENDENCE

- Seamless transition to backup mode for protection against power outages
- Fast charging / discharging to meet the demand of higher consumption

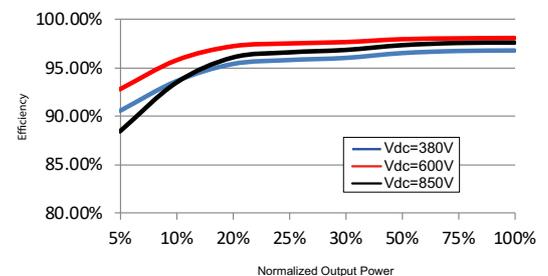
EASY INSTALLATION

- Unique push-in connectors for time-saving installation
- Touch free commissioning with smartphone
- Lightweight and compact

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH5.0RT)



| Type designation | SH5.0RT | SH10RT |
|--|---|--|
| Input (DC) | | |
| Recommended max. PV input power | 7500 W | 15000 W |
| Max. PV input voltage | | 1000 V |
| Min. PV input voltage / Startup input voltage | 150 V / 180 V | 200 V / 250 V |
| Rated PV input voltage | | 600 V |
| MPP voltage range | 150 V – 950 V | 200 V - 950 V |
| MPP voltage range for rated power | 210 V – 850 V | 280 V - 850 V |
| No. of independent MPP inputs | | 2 |
| No. of PV strings per MPPT | 1 / 1 | 1 / 2 |
| Max. PV input current | 25 A (12.5 A / 12.5 A) | 37.5 A (12.5 A / 25 A) |
| Max. DC short-circuit current | 36A (18A / 18A) | 54A (18A / 36A) |
| Max. current for input connector | | 30 A |
| Battery Data | | |
| Battery type | | Li-ion battery |
| Battery voltage | | 150V - 600V |
| Max charge / discharge current | | 30A * / 30A * |
| Max charge / discharge power | 7500 W / 6000 W | 10600 W / 10600 W |
| Input and Output (AC) | | |
| Max. AC input power | 11600 W | 14000 W |
| Max. AC power from grid | 12500 VA | 20600 VA |
| Rated AC output power | 5000 W | 10000 W |
| Max. AC output apparent power | 5000 VA | 10000 VA |
| Rated AC output apparent power | 5000 VA | 10000 VA |
| Rated AC output current | 7.3 A | 14.5 A |
| Max. AC output current | 7.6 A | 15.2 A |
| Rated AC voltage | | 3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V |
| AC voltage range | | 270 - 480 V |
| Rated grid frequency | | 50 Hz |
| Grid frequency range | | 45 - 55 Hz |
| Harmonic (THD) | | < 3 % (of rated power) |
| Power factor at Rated power / Adjustable power factor | | >0.99 / 0.8 leading to 0.8 lagging |
| Feed-in phases / connection phases | | 3 / 3-N-PE |
| Backup Data | | |
| Rated voltage | | 3 / N / PE, 220 Vac / 230 Vac / 240 Vac |
| Total harmonic factor output voltage (Linear load) | | 2 % |
| Switch time to emergency mode | | <20 ms |
| Rated output power | 5000 W / 5000 VA | 10000 W / 10000 VA |
| Peak output power ** | 6000 W / 6000 VA, 5 min 10000 W / 10000 VA, 10 s | 12000 W / 12000 VA, 5 min |
| Rated output current for backup load during on grid mode | | 3 x 18.5 A |
| Efficiency | | |
| Max. efficiency / European efficiency | 98.0 % / 97.2 % | 98.4 % / 97.9 % |
| PV to Bat to Grid efficiency | | > 94 % |
| Protection & Function | | |
| Grid monitoring | | Yes |
| DC reverse polarity protection | | Yes |
| AC short-circuit protection | | Yes |
| Leakage current protection | | Yes |
| DC switch (solar) | | Yes |
| DC Overcurrent Protection (Battery) | | Yes |
| Surge Protection | | DC Type II / AC Type II |
| PID recovery function | | Yes |
| Parallel operation on grid port / Max. No. of inverters | | Master-slave mode / 5 (need same inverters type) |
| Battery input reverse polarity protection | | Yes |
| General Data | | |
| Topology (solar / battery) | | Transformerless / Transformerless |
| Degree of protection | | IP65 |
| Dimensions (W x H x D) | | 460*540*170 mm |
| Weight | | 27 kg |
| Mounting method | | Wall-mounting bracket |
| Operating ambient temperature range | | -25 °C to 60 °C |
| Allowable relative humidity range(Non-condensing) | | 0% - 100% |
| Cooling method | | Natural convection |
| Max. operating altitude | | 4000 m |
| Noise (Typical) | | 30 dB (A) |
| Display | | LED |
| Communication | | RS485, WLAN, Ethernet, CAN, 4 × DI, 1 × DO |
| DC connection type | | MC4 (PV) / Evo2 Compatible (Battery) |
| AC connection type | | Plug and play connector |
| Compliance | | IEC / EN 62109, IEC / EN 61000-6, EN 62477-1, IEC 61727, IEC 62116, IEC 61683, VDE-AR-N-4105, AS/NZS 4777.2:2020, EN50549-1, NRS 097-2-1, TOR Generator Type A |
| Country of manufacture | | China |

* Depending on the connected battery

** Can be reached only if PV and battery power is sufficient.